

Student Learning Advisory Service

Contact us

Please come and see us if you need any academic advice or guidance.

Canterbury

Our offices are next to Santander Bank

Open

Monday to Friday, 09.00 – 17.00

E: learning@kent.ac.uk

T: 01227 824016

Medway

We are based in room G0-09, in the Gillingham Building and in room DB034, in the Drill Hall Library.

Open

Monday to Friday, 09.00 – 17.00

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The Student Learning Advisory Service (SLAS) is part of the Unit for the Enhancement of Learning and Teaching (UFLT)

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AT A GLANCE/ PHARMACY CALCULATIONS FORMULATIONS

Calculating the quantity of each ingredient required to produce a different quantity of a master formula.



Example 1

Calculate the amount of each ingredient required for 1225mL of the formula listed below.

Ingredient	Master formula
Substance A	175g
Substance B	50g
Substance C	12% v/v
Substance D	75g
Substance E	1 in 2000 w/v
Water to:	350mL

Method

Step 1: Divide the amount you wish to make by the amount the formula is for

$$\frac{1225\text{mL}}{350\text{mL}} = 3.5$$

Step 2: Use this factor to calculate the amount of all the volumetric ingredients

$$3.5 \times 175g = \mathbf{612.5g}$$
 of Substance A ✓

$$3.5 \times 50g = \mathbf{175g}$$
 of Substance B ✓

$$3.5 \times 75g = \mathbf{262.5g}$$
 of Substance D ✓

Step 3: Calculate the amounts of the % and parts ingredients

$$\frac{12}{100} \times 1225mL = \mathbf{147mL}$$
 of substance C ✓

$$\frac{1}{2000} \times 1225mL = \mathbf{0.6125g}$$
 of substance E ✓

Q3

Calculate the amount of each ingredient required for 2400mL of the formula listed below

Ingredients	Master formula
Substance A	268g
Substance B	150g
Substance C	0.01% w/v
Substance D	12mL
Substance E	0.5% w/v
Water to:	500mL

Q4

Calculate the amount of each ingredient required for 15mL of the formula listed below

Ingredient	Master formula
Substance A	12mL
Substance B	4mL
Substance C	5mcl/mL
Substance D	0.5mg/mL
Substance E	8mL
Water to:	60mL

Answers

	Q1	Q2	Q3	Q4
A	72g	600mg	1286.4g	3mL
B	112.5g	300g	720g	1mL
C	30.6g	30mL	0.24g	75mcl
D	315mL	225mL	57.6mL	7.5mg
E	0.3825g	0.3g	12g	2mL

Q1

Calculate the amount of each ingredient required for 765mL of the formula listed below

Ingredient	Master formula
Substance A	16g
Substance B	25g
Substance C	4% w/v
Substance D	70mL
Substance E	0.05% w/v
Water to:	170mL

Q2

Calculate the amount of each ingredient required for 1.5L of the formula listed below

Ingredient	Master formula
Substance A	20mg
Substance B	10g
Substance C	2% v/v
Substance D	7.5mL
Substance E	0.02% w/v
Water to:	50mL